

## ABSTRACT OF THE DISCLOSURE

A semiconductor device includes at least one defect-free epitaxial layer. At least a part of the device is manufactured by a method of fabrication of defect-free epitaxial layers on top of a surface of a first solid state material having a first thermal evaporation rate and a plurality of defects, where the surface comprises at least one defect-free surface region, and at least one surface region in a vicinity of the defects, the method including the steps of selective deposition of a second material, having a high temperature stability, on defect-free regions of the first solid state material, followed by subsequent evaporation of the regions in the vicinity of the defects, and subsequent overgrowth by a third material forming a defect-free layer.